

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (Currently Amended) The~~An~~ electric power steering according to claim 14, wherein  
~~for generating an assist steering torque from an electric motor in response to a steering torque~~  
~~applied to a steering wheel, and then transmitting the assist steering torque to an output shaft of a~~  
~~steering equipment after a speed reduction using a worm gear system,~~

~~— wherein the worm gear system causes a hourglass worm driven by the electric~~  
~~motor to mesh with a worm wheel provided to the output shaft, and~~

at least one of bearings that bear rotatably the hourglass worm is composed of a tapered roller bearing, an angular contact bearing, or a magneto ball bearing, from which an outer ring can be separated.

2. (Currently Amended) The~~An~~ electric power steering according to claim 14, wherein  
~~for generating an assist steering torque from an electric motor in response to a steering torque~~  
~~applied to a steering wheel, and then transmitting the assist steering torque to an output shaft of a~~  
~~steering equipment after a speed reduction using a worm gear system,~~

~~— wherein the worm gear system causes a hourglass worm driven by the electric~~  
~~motor to mesh with a worm wheel provided to the output shaft,~~

a bearing holder is provided to at least one of bearings that bear rotatably the hourglass worm, and is put onto an outer ring of the bearing and has a taper surface on an outer peripheral surface, and

a taper hole with which the taper surface of the bearing holder is engaged is formed in a gear housing.

3. (Currently Amended) ~~The~~An electric power steering according to claim 14, wherein  
~~for generating an assist steering torque from an electric motor in response to a steering torque~~  
~~applied to a steering wheel, and then transmitting the assist steering torque to an output shaft of a~~  
~~steering equipment after a speed reduction using a worm gear system,~~

~~— wherein the worm gear system causes a hourglass worm driven by the electric~~  
~~motor to mesh with a worm wheel provided to the output shaft,~~

a bearing holder is provided to at least one of bearings that bear rotatably the hourglass  
worm, and is fitted into an inner ring of the bearing and has a taper surface on an inner peripheral  
surface, and

a taper surface that is engaged with the taper surface of the bearing holder is formed on a  
shaft end portion of the hourglass worm.

4. (Currently Amended) ~~The~~An electric power steering according to claim 14, wherein  
~~for generating an assist steering torque from an electric motor in response to a steering torque~~  
~~applied to a steering wheel, and then transmitting the assist steering torque to an output shaft of a~~  
~~steering equipment after a speed reduction using a worm gear system,~~

~~— wherein the worm gear system causes a hourglass worm driven by the electric~~  
~~motor to mesh with a worm wheel provided to the output shaft,~~

an inner peripheral surface of an inner ring of at least one of bearings that bear  
rotatably the hourglass worm is formed as a taper surface, and

a taper surface that is engaged with the taper surface of the inner ring is formed on  
the hourglass worm.

5. (Currently Amended) TheAn electric power steering according to claim 14, wherein  
~~for generating an assist steering torque from an electric motor in response to a steering torque~~  
~~applied to a steering wheel, and then transmitting the assist steering torque to an output shaft of a~~  
~~steering equipment after a speed reduction using a worm gear system,~~

~~— wherein the worm gear system causes a hourglass worm driven by the electric~~  
~~motor to mesh with a worm wheel provided to the output shaft, and~~

at least one of bearings that bear rotatably the worm wheel is a tapered roller  
bearing, an angular contact bearing, or a magneto ball bearing, from which an outer ring can be  
separated.

6. (Currently Amended) TheAn electric power steering according to claim 14, wherein  
~~for generating an assist steering torque from an electric motor in response to a steering torque~~  
~~applied to a steering wheel, and then transmitting the assist steering torque to an output shaft of a~~  
~~steering equipment after a speed reduction using a worm gear system,~~

~~— wherein the worm gear system causes a hourglass worm driven by the electric~~  
~~motor to mesh with a worm wheel provided to the output shaft,~~

a bearing holder is provided to at least one of bearings that bear rotatably the worm  
wheel, and is put onto an outer ring and has a taper surface on an outer peripheral surface and

a taper hole with which the taper surface of the bearing holder is engaged is formed in a  
gear housing.

7. (Currently Amended) TheAn electric power steering according to claim 14, wherein  
~~for generating an assist steering torque from an electric motor in response to a steering torque~~  
~~applied to a steering wheel, and then transmitting the assist steering torque to an output shaft of a~~  
~~steering equipment after a speed reduction using a worm gear system,~~

~~— wherein the worm gear system causes a hourglass worm driven by the electric~~  
~~motor to mesh with a worm wheel provided to the output shaft, and~~

at least one of bearings that bear rotatably the hourglass worm is provided such  
that a position can be changed with respect to a gear housing in a center-to-center direction.

8. (Original) An electric power steering for generating an assist steering torque from an electric motor in response to a steering torque applied to a steering wheel, and then transmitting the assist steering torque to an output shaft of a steering equipment after a speed reduction using a worm gear system,

wherein the worm gear system causes a worm driven by the electric motor to mesh with a worm wheel provided to the output shaft, and

a tooth profile of the worm wheel and a tooth profile of the worm are shaped into a special tooth profile in which a first line of contact and a second line of contact, which intersect with a sliding direction of the worm and intersect with each other, and a tooth surface of an intermediate gear is formed as a conical surface.

9. (Original) An electric power steering according to claim 8, wherein at least a dedendum shape of the worm is formed as a hourglass shape.

10. (Currently Amended) An electric power steering according to claim 8 ~~or 9~~, wherein a consistency of a grease is set to 385 or less.

11. (Original) An electric power steering according to claim 10, wherein a width of the worm wheel is formed wider than a minimum dedendum circle diameter of the hourglass worm.

12. (Currently Amended) An electric power steering according to claim 10 ~~or 11~~, wherein a clearance on both end sides is set larger than a clearance in a center portion of the worm wheel in a tooth trace direction.

13. (Currently Amended) An electric power steering according to claim 10 ~~any one of claims 10 to 12~~, wherein the electric motor is a brushless motor.

14. (Original) An electric power steering for generating an assist steering torque from an electric motor in response to a steering torque applied to a steering wheel, and then transmitting the assist steering torque to an output shaft of a steering equipment after a speed reduction using a worm gear system,

wherein the worm gear system causes a hourglass worm driven by the electric motor to mesh with a worm wheel provided to the output shaft.

15. (Original) An electric power steering according to claim 14, wherein a backlash on both end portions of the hourglass worm is set larger than a backlash in an engagement center portion of the hourglass worm.

16. (Currently Amended) An electric power steering according to claim 14 ~~or 15~~, wherein a number of working teeth between the hourglass worm and the worm wheel is increased in response to a transmission torque.

17. (Original) An electric power steering according to claim 16, wherein at least one of working teeth of the hourglass worm and the worm wheel can be deformed elastically.

18. (Original) An electric power steering according to claim 17, wherein at least tooth portion of the worm wheel is formed of resin material.

19. (Original) An electric power steering according to claim 18, wherein a number of threads of the hourglass worm is set to 2 threads or more.

20. (Original) An electric power steering according to claim 14, wherein a tooth thickness adjusting process of reducing each tooth thickness is applied to the hourglass worm.

21. (Original) An electric power steering according to claim 20, wherein the tooth thickness adjusting process of the tooth thickness adjusting process shapes a tooth profile such that a tooth thickness is thinned toward both end portions from a center portion of the worm in an axial direction.

22. (Currently Amended) An electric power steering according to claim 20 ~~or 21~~, wherein the tooth thickness adjusting process of the tooth thickness adjusting process shapes the tooth profile such that the process is not applied to a predetermined interval of the center portion of the worm in the axial direction and the process is applied to remaining intervals either to reduce the tooth thickness toward both end portions or to form a constant tooth thickness that is thinner than the tooth thickness in an interval in which the process is not applied.